

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	132	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.0	kW	Tj = - 7 °C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.9	kW	Tj = + 2 °C	COPd	3.27	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.4	kW	Tj = + 7 °C	COPd	4.64	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.3	kW	Tj = +12 °C	COPd	5.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	8.0	kW	Tj = bivalent temperature	COPd	2.13	-
Tj = operation limit temperature (***)	Pdh	7.9	kW	Tj = operation limit temperature (***)	COPd	2.05	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.1	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	5527	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



 Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

* Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

* Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	167	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.5	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	5.0	kW	Tj = + 7 °C	COPd	5.62	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.6	kW	Tj = +12 °C	COPd	7.53	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	8.5	kW	Tj = bivalent temperature	COPd	3.15	-
Tj = operation limit temperature (***)	Pdh	8.4	kW	Tj = operation limit temperature (***)	COPd	2.91	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	4659	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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 (**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0.9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

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Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	111	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.4	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.3	kW	Tj = + 2 °C	COPd	3.00	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.47	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	7.6	kW	Tj = bivalent temperature	COPd	2.05	-
Tj = operation limit temperature (***)	Pdh	7.6	kW	Tj = operation limit temperature (***)	COPd	1.75	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	7.4	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.11	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.5	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	7751	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	123	%
Daily electricity consumption	Qelec	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	146	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.8	kW	Tj = - 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 2 °C	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.7	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.96	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	8.1	kW	Tj = bivalent temperature	COPd	3.26	-
Tj = operation limit temperature (***)	Pdh	7.8	kW	Tj = operation limit temperature (***)	COPd	2.35	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	7.8	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	3.31	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	6340	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	123	%
Daily electricity consumption	Qelec	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	155	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	2.25	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	2.25	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	2.25	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	3044	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(T_j).

 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	213	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	3.85	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	5.25	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.61	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	3.85	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	3.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	2224	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	132	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.0	kW	Tj = - 7 °C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.9	kW	Tj = + 2 °C	COPd	3.27	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.4	kW	Tj = + 7 °C	COPd	4.64	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.3	kW	Tj = +12 °C	COPd	5.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	8.0	kW	Tj = bivalent temperature	COPd	2.13	-
Tj = operation limit temperature (***)	Pdh	7.9	kW	Tj = operation limit temperature (***)	COPd	2.05	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.1	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	5527	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	167	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.5	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	5.0	kW	Tj = + 7 °C	COPd	5.62	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.6	kW	Tj = +12 °C	COPd	7.53	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	8.5	kW	Tj = bivalent temperature	COPd	3.15	-
Tj = operation limit temperature (***)	Pdh	8.4	kW	Tj = operation limit temperature (***)	COPd	2.91	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	4659	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier;

Atsushi EDAYOSHI

The signature is signed in the average climate / medium-temperature section.

Manager, Quality Assurance Department

UNITED KINGDOM

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 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(T_j).

 (**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	111	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.4	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.3	kW	Tj = + 2 °C	COPd	3.00	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.47	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	7.6	kW	Tj = bivalent temperature	COPd	2.05	-
Tj = operation limit temperature (***)	Pdh	7.6	kW	Tj = operation limit temperature (***)	COPd	1.75	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	7.4	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.11	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	P _{sup}	1.5	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	7751	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	123	%
Daily electricity consumption	Qelec	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	no	
Heat pump combination heater:	yes	
Parameters for	low-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	146	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.8	kW	Tj = - 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 2 °C	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.7	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.96	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	8.1	kW	Tj = bivalent temperature	COPd	3.26	-
Tj = operation limit temperature (***)	Pdh	7.8	kW	Tj = operation limit temperature (***)	COPd	2.35	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	7.8	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	3.31	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	6340	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	123	%
Daily electricity consumption	Q _{elec}	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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(**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0.9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	no	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	warmer climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	155	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	2.25	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	2.25	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	2.25	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	3044	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	EHST20C-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	213	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	3.85	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	5.25	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.61	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	3.85	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	3.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	2224	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Q _{elec}	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

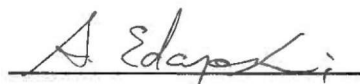
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	134	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.0	kW	Tj = - 7 °C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.9	kW	Tj = + 2 °C	COPd	3.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.4	kW	Tj = + 7 °C	COPd	4.64	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.3	kW	Tj = +12 °C	COPd	5.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	8.0	kW	Tj = bivalent temperature	COPd	2.13	-
Tj = operation limit temperature (***)	Pdh	7.9	kW	Tj = operation limit temperature (***)	COPd	2.05	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.1	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	5413	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	172	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.5	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.09	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	5.0	kW	Tj = + 7 °C	COPd	5.62	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.6	kW	Tj = +12 °C	COPd	7.53	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	8.5	kW	Tj = bivalent temperature	COPd	3.15	-
Tj = operation limit temperature (***)	Pdh	8.4	kW	Tj = operation limit temperature (***)	COPd	2.91	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.2	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	4539	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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 (**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0.9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	medium-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	114	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.4	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.3	kW	Tj = + 2 °C	COPd	3.09	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.45	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	7.6	kW	Tj = bivalent temperature	COPd	2.05	-
Tj = operation limit temperature (***)	Pdh	7.6	kW	Tj = operation limit temperature (***)	COPd	1.75	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	7.4	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.11	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.5	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	7611	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	123	%
Daily electricity consumption	Qelec	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier;

Atsushi EDAYOSHI

The signature is signed in the average climate / medium-temperature section.

Manager, Quality Assurance Department

UNITED KINGDOM

· Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

· Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.

 (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(T_j).

 (**) If C_{dH} is not determined by measurement then the default degradation coefficient is C_{dH} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:	yes	
Water-to-water heat pump:	no	
Brine-to-water heat pump:	no	
Low-temperature heat pump:	no	
Equipped with a supplementary heater:	yes	
Heat pump combination heater:	yes	
Parameters for	low-temperature application.	
Parameters for	colder climate conditions.	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.6	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	5.8	kW	Tj = - 7 °C	COPd	3.60	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 2 °C	COPd	3.80	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.7	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.96	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	8.1	kW	Tj = bivalent temperature	COPd	3.26	-
Tj = operation limit temperature (***)	Pdh	7.8	kW	Tj = operation limit temperature (***)	COPd	2.35	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	7.8	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	3.31	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	6198	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	123	%
Daily electricity consumption	Qelec	3.990	kWh				
Annual electricity consumption	AEC	877	kWh				

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 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	2.25	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	3.45	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	2.25	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	2.25	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m³/h	
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	2966	kWh				
For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			ηwh	161	%	
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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 (**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

 (***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW80YAA(-BS)
	Indoor unit:	ERST20C-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9.0	kW	Seasonal space heating energy efficiency	ηs	221	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	9.0	kW	Tj = + 2 °C	COPd	3.85	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.8	kW	Tj = + 7 °C	COPd	5.14	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.61	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	3.85	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	3.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m³/h	
Sound power level, indoors/outdoors	L _{WA}	40 / 59	dBA				
Annual energy consumption	Q _{HE}	2146	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.